COAL FATAL

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF MINES BY D. HARRINGTON

SUBJECT: An ignition of methane gas causing an explosion at Kent No. 2 Mine of the Rochester and Pittsburgh Coal Company, McIntyre, PA., June 30, 1941.

An ignition of methane gas from a spark caused by an electric testing device caused the explosion June 30, 1941, at the Kent No. 2 mine of the Rochester and Pittsburgh Coal company near McIntyre, PA., which resulted in the deaths of seven men, the Bureau of Mines informed Secretary of the Interior Harold L. Ickes, following receipt of a detailed report of the disaster made by three Bureau engineers who aided in the recovery operations.

The explosion, according to the report, was not of great force and was restricted fortunately to one section of the mine, thus permitting over 200 men working in other places to escape. There were 41 miners in the section where the fatalities occurred, and in addition to the 7 killed, 16 men were injured, 3 seriously.

Evidence obtained by the Bureau's investigators revealed that although the mine was operated as a "non-gassy" mine, tests for gas made at the scene of the disaster before and after the explosion indicated the presence of methane sufficient to ignite under favorable circumstances. A contributing factor in the loss of life, the report disclosed, was the failure of two mine officials to respect a "danger" sign, erected before the men went to work that morning by a fire boss who detected gas in the working rooms where the explosion later occurred. According to the Bureau's report, evidence indicated that the "danger" sign was removed less than 10 minutes before the men were asked to begin work, normal operations continuing until the blast occurred 2-1/2 hours later.

Insufficient ventilation in the working places where the explosion occurred encouraged the accumulation of gas, according to the Bureau's report, and this was due in part to the use of portable blower fans and tubing--a ventilation practice not recommended by the Bureau of Mines. The instrument believed to have ignited the methane, according to the report, is known as a "test-lamp set", and consists of two Mazda bulbs which are lighted by touching the bare end of a connecting wire to the frame of a mining machine. When such a contact was made on this occasion, the report said, a spark was provided and the explosion initiated. The Bureau of Mines has tested similar sets in the laboratory and found that they will ignite certain gas-air mixtures.

The Bureau's report, signed by G. W. Grove, District Engineer; E. J. Gliem, Electrical Engineer, J. W. Pero, Assistant Mining Engineer; and approved by Dan HArrington, Chief of the Health and Safety Branch, gives the following probable cause of the disaster:

"After carefully considering observations made during recovery evidence and information obtained operations, during theinvestigation, the results of analysis of dust and air samples collected in the mine, and the careful weighing of information and testimony of the survivors and others brought out during the hearings conducted by the Department of Mines (Pennsylvania) and at the coroner's inquest, the Bureau investigators are of the opinion that this explosion originated in the face of room 44, 3 north, 7 right, and that the explosion was initiated by the ignition of an accumulation of methane in this room and possibly the adjoining room (No. 42) by a testing circuit being used by a mechanic to test a shortwall mining machine found near the face of room 44. That the explosion originated in this room is based on the direction of forces, heavy deposits of coke previously mentioned, and the fact that an explosive mixture of gas was found in this room at the time of the investigation."

The Bureau's investigation commended the operators of the mine for "a much better than average safety record for the past several years," pointing out that among the many approved safety practices in effect at this mine were the use of permissible electric cap lamps and open flame safety lamps, use of permissible explosives, maintenance of a mine-rescue station and a first-aid training organization, operation of a personnel department in which safety and efficiency records are kept, maintenance of a training school to instruct employees in the safe operation of electrical equipment, and interest of the company in the welfare of disabled employees.

Recommendations, "made with the belief that their adoption will materially lessen the chances of an explosion occurring in this mine in the future," were embodied in the Bureau's report. the recommendations deal with ventilation, coal dust, rock dusting, explosives, and electricity. "In view of the fact that this mine liberates a considerable quantity of explosive gas, it should be operated as a 'gassy' mine," the report suggests, adding that in order to increase the efficiency of the ventilating system, the use of blower fans and tubing should be discontinued. A complete and periodic checkup of the mine's electrical equipment, with ample and adequate repairs when needed, also was recommended in the report.

A telegram to D. Harrington stated: All bodies recovered McIntyre mine Rochester and Pittsburgh Coal Company about five p.m. Monday about 275 men in mine at time of explosion 41 in explosion area six dead 17 burned two seriously eighteen escaped without assistance three men overcome were resuscitated. Investigation Tuesday with Grove Pero Burdelsky and Gliem in cooperation with state. Explosion occurred in conveyor loading section confined to small area very little violence. Cause of ignition undetermined.

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Explosion area reported rock dusted but not observed by Bureau men during recovery work. Explosion probably initiated by gas with coal dust playing minor part. Mine classed nongassy but firebosses closed lights permissible explosives and blower fans used degree of permissible electrical equipment undetermined.

Explosion McIntyre mine occurred around 10 am in belt conveyor section. Approximately thirty six men in section at time of explosion. Twenty seven removed from effected section. Four of whom are dead several seriously burned nine unaccounted for. Just received call from Bureau man inside he states recovery work proceeding satisfactory and with good fortune recovery operations should be completed within three hours no information at present as to cause will wire you later this evening with more authentic information.

United Press reports explosion McIntyre mine Rochester and Pittsburgh Coal Company. Have just contacted Steinheiser State mine Inspector and officials Rochester and Pittsburgh Coal Company only information they have at present time is explosion occurred at eleven AM this morning. Eight men that were burned have been removed from mine approximately thirty men were working in that section. No other information available at this time. Rescue truck with Forbes Frove Fene Pero Griffith and Leitch proceeding. Y TELEGRAM

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D. HARRINGTON

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U S BUREAU OF MINES WASHINGTON DC

BODIES RECOVERED MCINTYRE MINE ROCHESTER AND PITTSBURGH ALL MINE AT COMPANY ABOUT FIVE PM MONDAY ABOUT 275 MEN IN COAL TIME OF EXPLOSION 41 IN EXPLOSION AREA SIX DEAD 17 BURNED EIGHTEEN ESCAPED WITHOUT ASSISTANCE THREE MEN TWO SERIOUSLY RESUSCITATED. INVESTIGATION TUESDAY WITH GROVE OVERCOME WERE PERO BURDELSKY AND GLEIM IN COOPERATION WITH STATE. EXPLOSION TO SMALL AREA OCCURRED IN CONVEYOR LOADING SECTION CONFINED LITTLE VIOLENCE. CAUSE OF IGNITION UNDETERMINED. EXPLOSION VERY AREA REPORTED ROCK DUSTED BUT NOT OBSERVED BY BUREAU MEN DURING RECOVERY WORK. EXPLOSION PROBABLY INITIATED BY GAS WITH DUST PLAYING MINOR PART. MINE CLASSED NONGASSY BUT COAL LIGHTS PERMISSIBLE EXPLOSIVES AND BLOWER FANS FIREBOSSES CLOSED USED DEGREE OF PERMISSIBLE ELECTRICAL EQUIPMENT UNDETERMINED.

FORBES

cc: Mr. Nightman Fieldner Harrington Pehrson Jackson Dr. Huff, College Park Secrest Sherman Adams Stone Parker Safety Division Files

mc Intyre mine is Known as Want to 1 + to 2

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DAN HARRINGTON BUREAU OF MINES DEPT INTERIOR WASHDC

EXPLOSION MCINTYRE MINE OCCURRED AROUND 10 AM IN BELT CONVEYOR SECTION. APPROXIMATELY THIRTY SIX MEN IN SECTION AT TIME OF EXPLOSION. TWENTY SEVEN REMOVED FROM EFFECTED SECTION. FOUR OF WHOM ARE DEAD SEVERAL SERIOUSLY BURNED NINE UNACCOUNTED FOR. JUST RECEIVED CALL FROM BUREAU MAN INSIDE HE STATES RECOVERY WORK PRO-CEEDING SATISFACTORY AND WITH GOOD FORTUNE RECOVERY OPERATIONS SHOULD BE COMPLETED WITHIN THREE HOURS NO INFORMATION AT PRESENT AS , TO CAUSE WILL WIRE YOU LATER THIS EVENING WITH MORE AUTHENTIC INFOR-MATION.

FORBES

cc: Mr. Nighman Mr. Fieldner Mr. Harrington Mr. Pehrson Mr. Jackson Dr. Huff, College Park Mr. Secrest Mr. Sherman Mr. Adams Mr. Stone Mr. Parker Safety Division Files RXWB1 76 GOVT COLLECT. PITTSBURGH PENN 30 11 40 1941 JUN 30 PM 12 31

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D. HARRINGTON, BUREAU OF MINES, INTERIOR BLDG.

UNITED PRESS REPORTS EXPLOSION MCINTYRE MINE ROCHESTER AND PITTSBURGH COAL COMPANY. HAVE JUST CONTACTED STEINHEISER STATE MINE INSPECTOR AND OFFICIALS ROCHESTER AND PITTSBURGH COAL COMPANY ONLY INFORMATION THEY HAVE AT PRESENT IS EXPLOSION OCCURRED AT ELEVEN AM THIS MORNING. EIGHT MEN THAT WERE BURNED HAVE BEEN REMOVED FROM MINE APPROXIMATELY THIRTY MEN WERE WORKING IN THAT SECTION. NO OTHER INFORMATION AVAILABLE AT THIS TIME. RESCUE TRUCK WITH FORBES GROVE FENE PERO GRIFFITH AND LEITCH PROCEEDING.

FORBES

| cc: | Mr. Nighman |
|-----|------------------------|
| | Mr. Fieldner |
| | Mr. Harrington |
| | Mr. Pehrson |
| | Mr. Jackson |
| | Dr. Huff, College Park |
| | Mr. Secrest |
| | Mr. Sherman |
| | Mr. Adams Kingh W |
| | Mr. Stone What |
| | Mr. Parker |
| | Safety Division |
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C.M. 1714

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF MINES WASHINGTON

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CONFIDENTIAL MEMORANDUM (Not for Publication)

November 28, 1941

TO MEMBERS OF THE SAFETY DIVISION:

SUBJECT: An ignition of methane gas causing an explosion at Kent No. 2 Mine.

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